

Serial No. 09/729,520

Page 2

IN THE CLAIMS:

1. (Currently Amended) A method of producing a library of mutant nucleic acid molecules comprising:
- (a) obtaining a template nucleic acid;
 - (b) preparing a first oligonucleotide corresponding to a first desired mutation within said template nucleic acid;
 - (c) preparing a second oligonucleotide corresponding to a second desired mutation within said template nucleic acid, wherein said first oligonucleotide and said second oligonucleotide are non-complementary;
 - (d) mixing the oligonucleotides prepared in said steps (b) and (c) so as to hybridize said oligonucleotides to said template nucleic acid;
 - (e) subjecting the mixture of step (d) to the linear cyclic amplification reaction to produce a library of mutant template nucleic acids.
2. (Original) The method according to claim 1, wherein said oligonucleotides in said steps (b) and (c) are discontinuous.
3. (Original) The method according to claim 1, wherein said step first and second oligonucleotides are present in less than saturation concentration.
4. (Original) The method according to claim 1, wherein the mixture of said step (d) further comprises non-mutagenic oligonucleotides corresponding to either or both of said first and second oligonucleotides.
5. (Original) The method according to claim 1, wherein said template nucleic acid corresponds to a desired protein product.

Serial No. 09/729,520

Page 3

6. (Original) The method according to claim 4, wherein said protein product comprises an enzyme, hormone, vaccine, peptide therapeutic or antibody.

7. (Canceled)

8. (New) The method of Claim 4, wherein there are more than two said non-mutagenic oligonucleotides.
